

LEBEDEV, V. I.

Lebedev, V. I. "On the problem of the methods of developing Soviet mineralogy and the problem of the power engineering of silicates", (In connection with the article by V. S. Sobolev entitled "The significance of the coordination number of aluminum in silicates", in Mineral. sbornik, (L'vovsk. geol. o-va), No. 1, 1947), Vestnik Leningr. unta, 1948, No. 11, p. 46-68, Bibliog: 36 items.

SO: U-4630, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 23, 1949).

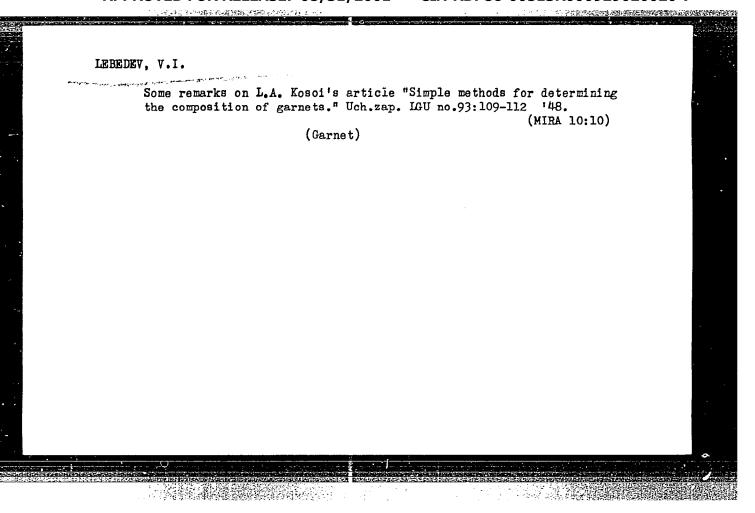
The minergical volume rule and the energy of chemical bonding. V. I. Lebedev. Doklady Akad. Nauk S.S.S.R.

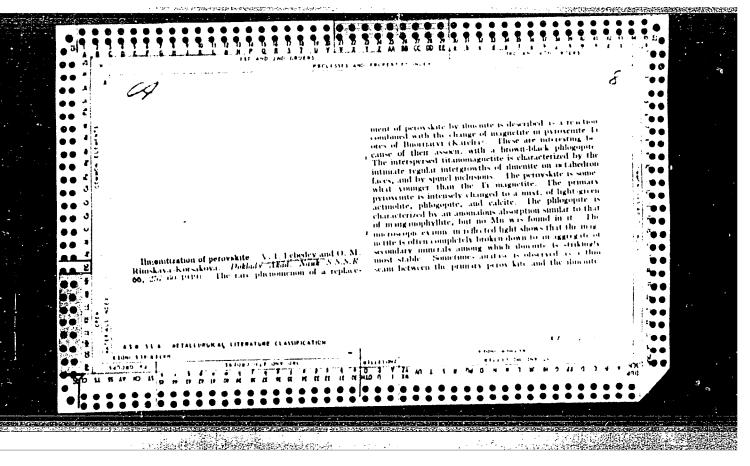
33, 437-40(1985).—The classical vol. rule in the mineralization of metamorphic rocks is a particular expression for the more generalized Le Chatelier principle of reaction. It was early observed that among the characteristic rock-forming minerals only the Fe Mg silicates obey the vol. rule exactly, while the aluminosilicates (feldspars, nephelite, leucite), and quartz show anomalies; their mol. vol. is larger than that of the sum of the ingredient oxides. Reloy's (Siruktura ionnykh kristallov, 1947 (C.A. 42, 4831d) principle of densest packings in crystal structures was formulated as a general tendency of crystg. material. But a discussion of the structural details in the mineral pairs kyanite-silimanite and aragonite-calcite shows that the densest structures (in the geometrical meaning) do not correspond to the lower mol. vol. The tendency to form densest packings is only a part of a more generalized principle derived from the discussion of the energy changes in forming louic and covalent bonding in Si7, and the 50% participation of covalent bonding mechanisms in quartz illustrates the contrasting energy conditions, e.g. in the thermochem. open structures, frameworks, etc., as are known in the SiO-modifications, the feldspars and feldspathoids, etc., and for

the polymorphic inversions of kyanite to sillimanite, or aragonite to calcite, the energy conditions indicate the prevailing effects of covalent bonding. While ionic bonding is highly energy-absorbing, covalent bonding requires very little energy absorption. The geometrical principle of a tendency to form dered packed structures combined with a general principle of man, energy absorption is essential in the conditions of reactions with vol. changes. The vol. rule is, therefore, restricted by a more general law which is called "principle of energy suitability" and comprises both factors mentioned.

W. Eitel

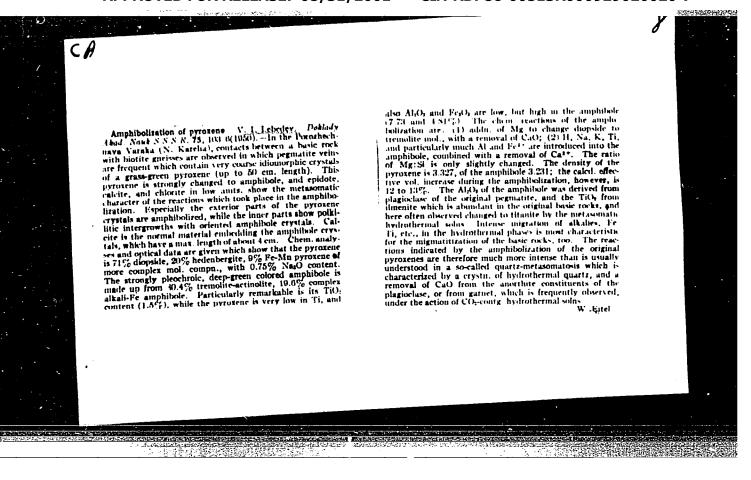
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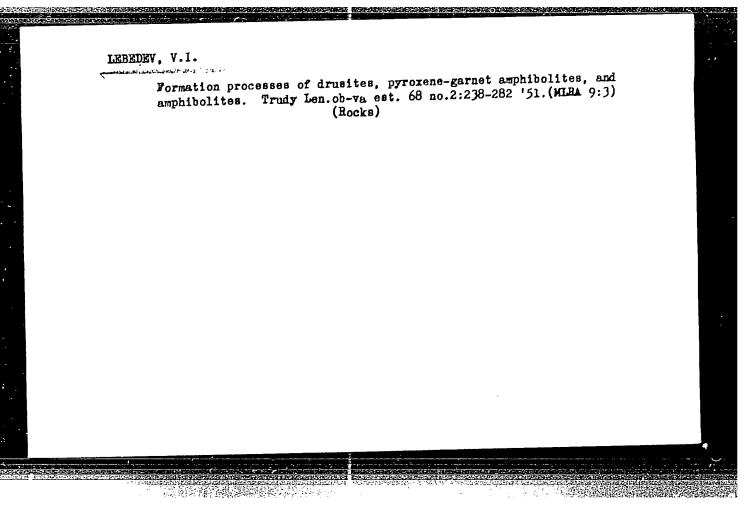


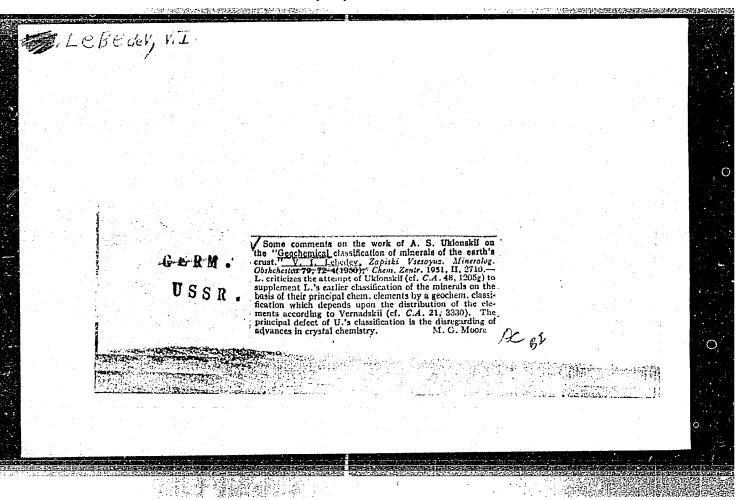


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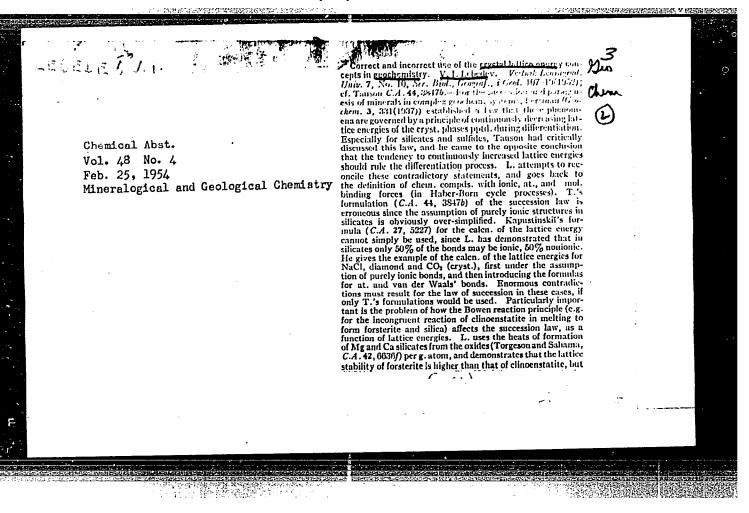


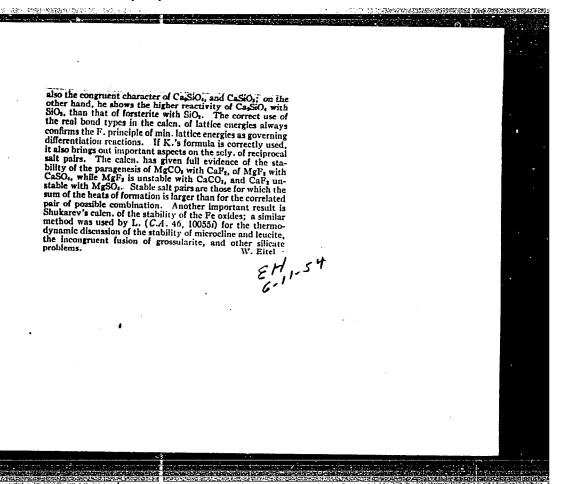




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LEBEDEV, V.I.

Silicates

Several examples of energy alalysis of processes in the formation of silicates according to the method of Prof. S.A. Shchukarev. Zap. Vses. min. ob. 21 no.2. 152

Monthly List of Russian Accessions, Library of Congress, September 1952. Unclassified.

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Chemical Abst.

Chemical Abst.

Vol. 48 No. 9

May 10, 1954

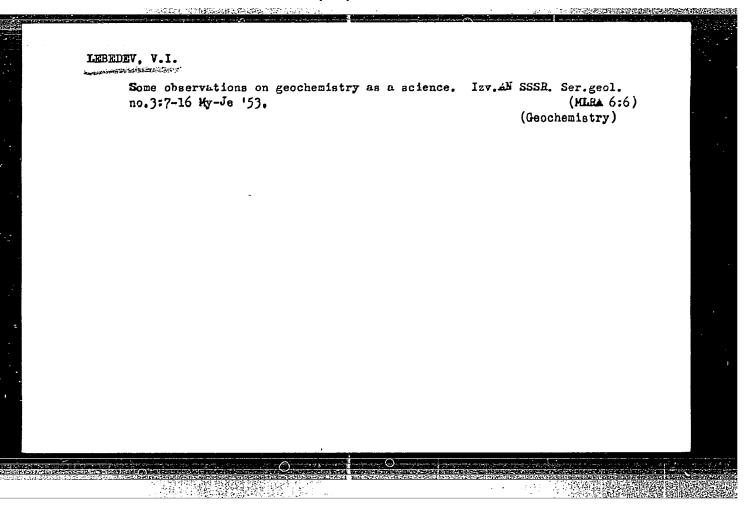
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Chemistry

Chemical Abst.

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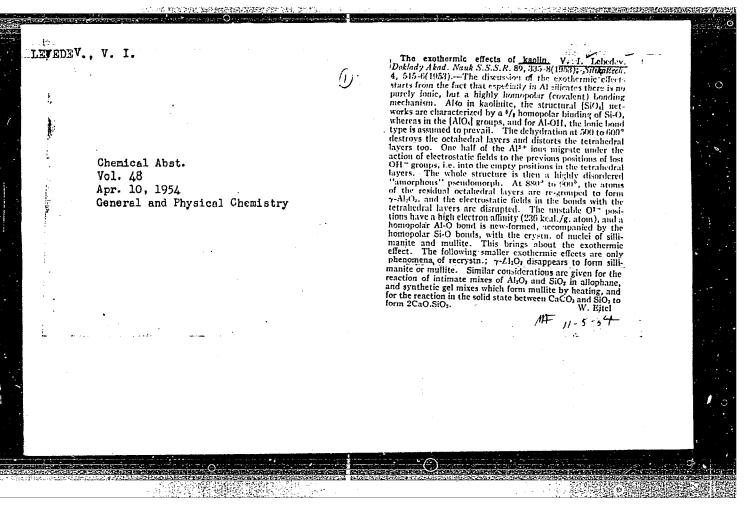
"Directing the Critici is by N. A. Lendiya and G. A. Poheolov-Patrocy a of the Article "Several Examples of Energy Analysis of Processes of Formation of Silicates According to the Method of Prof S. A. Shoku-karev", Zap. Urbekist. otd. Vses. mineralog. o-ve, 82, No 3, pp 147-148, 1953

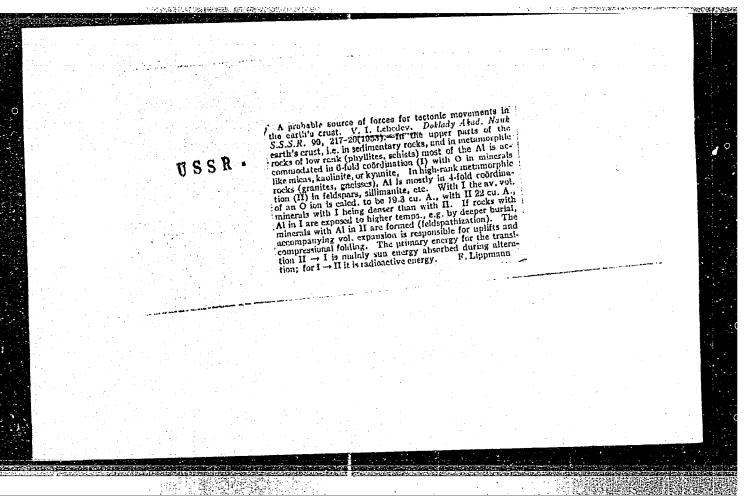
Taking exception to the criticism of his article, the author explains that he did not recommend the method of S. A. Shchukarev for the analysis of the processes governing the formation of silicates at high temperatures used in ceremic practice, but considers that this method is fully applicable for conditions holding true in nature, and possesses a number of advantages in comparison with the method of thermolynamic study of free energy. (RinGeol, No. 1955)

Sud. No. 681, 7 Oct 55

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Energy sources USSR/Geology

Card

Pub. 46 - 3/16

Authors

Lebedev, V. I.

Title

About the possibility of solar energy absorption by the crystalline

matter of the earth

Periodical

: Izv. AN SSSR. Ser. geol. 4, 50 - 74, July - August 1954

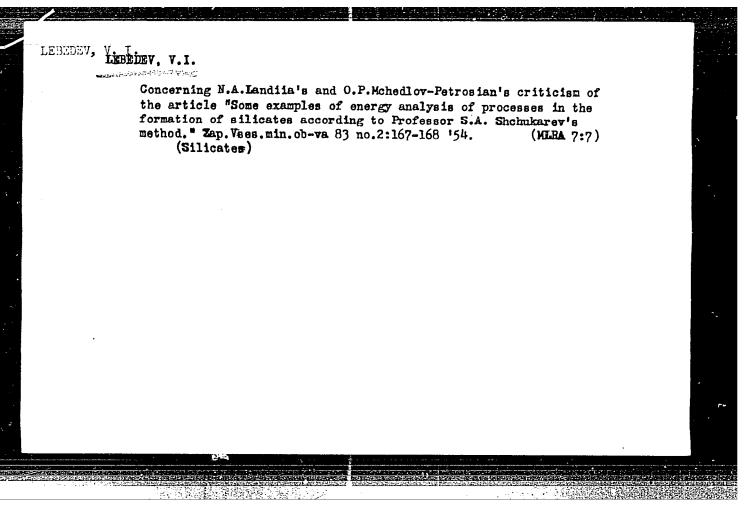
Abstract

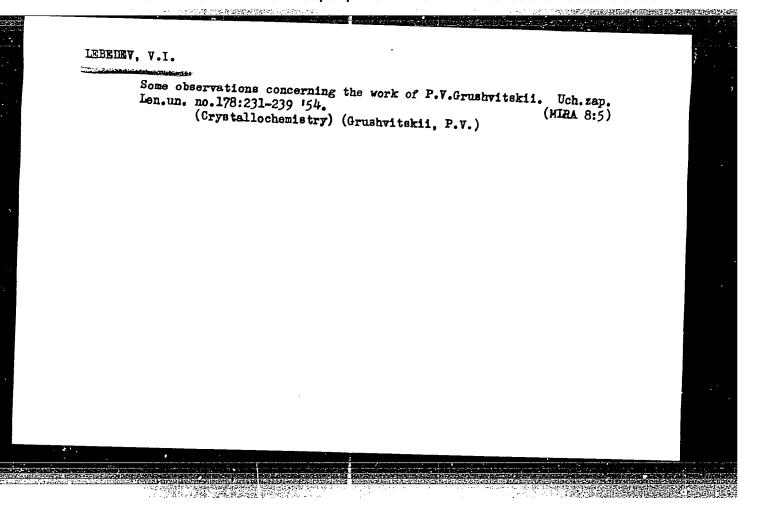
The problem of energy sources (especially solar radiation), which bring life into the crust of the earth, including the atmosphere (its troposphere), hydrosphere, biosphere and lithosphere, was analyzed theoretically. The effect of endo- and exogeneous forces on the magmatism, deep metamorphism, formation of geosynclinal depressions and mountains, is explained. The direct effect of solar energy on minerals and rocks of endogeneous origin, the high-energy carrying substances of biogeneous origir, and the possible absorption of solar energy, by crystalline substances of the earth, are discussed. Forty-four references: 36 USSR, 5 USA and 3 Cerman (1912 - 1954). Tables; graphs; illustration.

Institution

Submitted : August 24, 1953

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LEBEDEV, V. I.

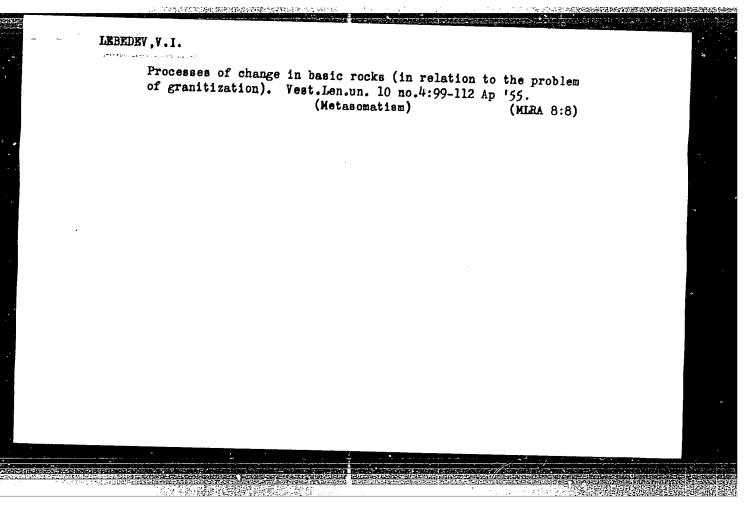
LEBEDEV, V. I. --"Fundamentals of Energy Analysis of Geochemical Processes."

(Dissertations For Degrees In Science and Engineering Defended at USSR Higher Educational Institutions) (29) Leningrad State Order of Lenin U iment A. A. Zhdanov, Leningrad, 1955

SO: Knizhnaya Letopis' No 29, 16 July 1955

* For the Degree of Doctor of Geologicmineralogical Sciences

Distribution of elements in the earth's crust and hypotheses on the origin of the earth. Min.sber.ne.9:38-49 '55. (MERA 9:9) 1.Leningrad. Gesudarstvennyy universitet imeni A.A.Zhdaneva. (Barth) (Geschemistry)



D.

USSR/ Cosmochemistry. Geochemistry. Hydrochemistry

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11521

Author : Lebedev V.I.

Inst : Leningred State University Title

on the Origin of Carbonate-Anthophyllite-Actinolite Rocks of Cape

Kartash in Northern Karelia

Orig Pub : Uch. zap. LGU, 1955, No 188, 23-58

Abstract : Presented are the results of investigations of the rarely occuring, in the

White Sea area, carbonate-anthophyllite-actinolite rocks, and the specific features of their chemical composition are discussed. The rocks under study form strato-lenticular bodies within the belt of amphibolite and garnetamphibolite gneisses and schists, magmatized to a varying extent, underlying biotite and garnet-biotite gneisses magmatized much more extensively. In mineralogical composition predominant are carbonate-anthophyllite-actinolite rocks with a high content of carbonate and varying anthophyllite to actinolite ratio. Carbonate is represented by breunerite, ankerite and dolomite. Chrompicotite and rhombic pyroxene are encountered. Subsidia-

ry minerals: phlogopite, chlorite sulfides (mostly pyrrhotine) etc.

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D.

USSR/ Cosmochemistry. Geochemistry. Hydrochemistry

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11521

Rocks under study were produced by extensive metamorphism of ultrabasic rocks as a result of amphibolization pracesses, they are close to peridotites and olivinic gabbro-norites and are remote from carbonate rocks of primary sedimentation origin. Accumulation of carbonates took place as a result of circulation of hydrothermal solutions, containing CO2, under conditions precluding removal, into the enclosing rocks, of excess magnesium. Presented are chemical analyses of rocks, carbonate, anthophyllite, actinolite, and spectral analyses of actinolite, anthophyllite and spinel.

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2/2

USSR/Cosmochemistry - Geochemistry. Hydrochemistry, D

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61311

Author: Lebedev, V. I.

Institution: None

Title: Contribution to the Mineralogy of Pyroxene Containing Pegmatite

Veins of hechnaya "Varaka" /Forested Cliff

Original

Periodical: Uch. zap IGU, 1955, No 188, 73-90

Abstract: Pegmatite veins of Porozhechnaya varaka in northern Karelia are

characterized by the fact that they contain, in addition to quartz and feldspars considerable amounts of pyroxene (diopside). Enclosing rocks: gabbronorites converted to pyroxenic amphibolites. Diopside developed mostly along casings at contacts with xeno-lites. Assularge crystals are as a rule ambibolized in contrast with the small ones which being enclosed in granules of quartz and feldspars have retained original appearance. In the process

of amphibolization the diopside has been replaced by common

Card 1/2

CIA-RDP86-00513R000929020020-7 APPROVED FOR RELEASE: 08/31/2001

Name: LESEDEV, Vasiliy Il'ich

Dissertation: Principiles of power engineering analysis of geochemical processes

Doc Geol-Min Sci Degree:

Inot indicated? Affiliation:

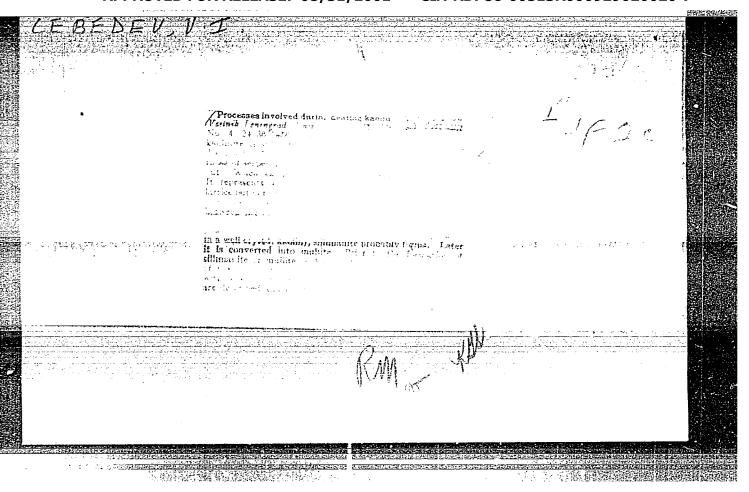
31 Oct 55, Council of Leningrad Order of Lenin State U imeni Zhdanov Defense Date, Place:

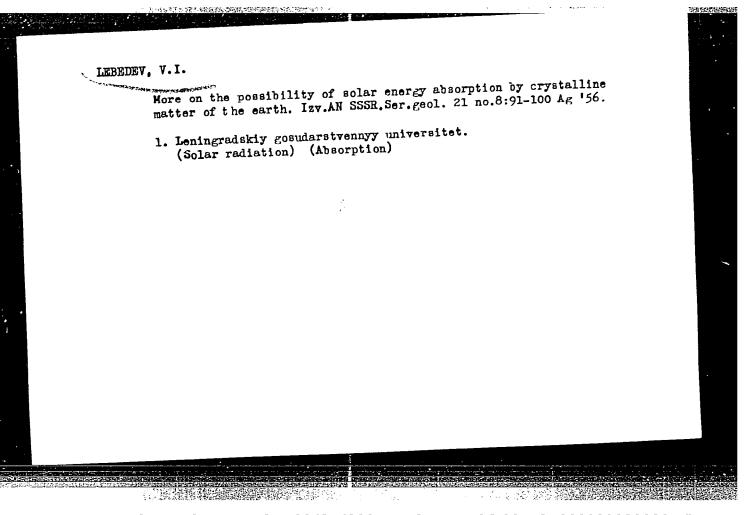
Certification Date: 26 May 56

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Source: BMV0 4/57

CIA-RDP86-00513R000929020020-7" APPROVED FOR RELEASE: 08/31/2001





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Lebedev, Vasiliy Il'ich

Osnovy energeticheskogo analiza geokhimicheskikh protsessov (Principles of Analyzing the Energy in Geochemical Processes) Leningrad, Izd-vo Leningradskogo univ-ta, 1957, 341 p. 2,500 copies printed.

Sponsoring Agency: Leningrad Universitet.

Ed.: Kelarev, L.A. Tech. Ed.: Vodolagina, S.D.

PURPOSE: The book is intended for specialists in geochemistry, mineralogy and petrography and for graduate students taking courses in geochemistry.

COVERAGE: The book consists of two parts: Part I: "Physical and Chemical Principles of Geochemistry" and Part II: "Use of Principles of Geochemistry for Solving Some Geological and Mineralogical Problems." Some recent achievements in chemistry and physics are applied to the field of geochemistry. General problems in geochemistry are discussed, such as why some elements combine with oxygen and others with sulfur, the reason for the formation of complex compounds, etc. Migration of elements and energy sources of these processes are also discussed. The author

card 1/8

Principles of Analyzing the Energy (Cont.) 632	
thanks Academician N.V. Belov, Professor S.M. Kurbatov, Professor I.I. Shekiy, Professor L.V. Komlev, Professor V.V. Shcherbina, and Docent S.M. A editing his book. V.N. Danilkina and A.V. Kryuko aided him in preparing script. There are 267 references of which 246 are Soviet, 28 English, 11 Italian, and 1 Polish.	riya for the manu-
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LEBEDEV, V.I.; BELOV, N.V.

Concerning O.P.Mchedlov-Petrosian's critique of the hypothesis of the accumulation of solar energy by crystalline substance. Min.sbor. no.11:371-374 '571 (MIRA 13:2)

1. Institut kristallografii AN SSSR, Moskva. (Solar energy)

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LAC FOR DELV. V.I.

Factors stipulating the migration of the alkalies and alkali earth elements in the zone of hypergenesis [with summary in Anglish].

Geokhimina AN SSSR no.6:508-517 '57. (MIRA 11:2)

1. Leningradskiy gosudarstvennyy universitet.

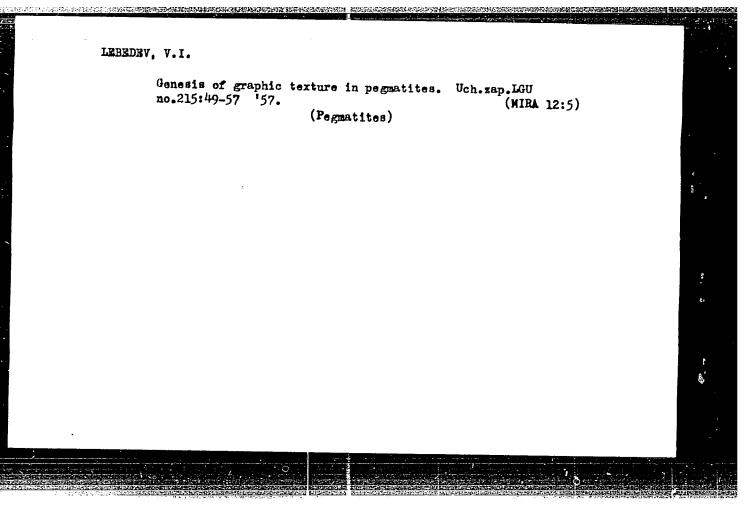
(Alkalies) (Ions--Migration)

BELOY, N.V., akademik; LEBEDEY, V.I., doktor geologo-mineralogicheskikh nauk.

Energy sources of geochemical processes. Priroda 46 no.5:11-20 My
157.

1. Institut kristallografii Akademii nauk SSSR (Moskva) (for Belov).
2. Ieningradskiy gosudarstvennyy universitet im, A.A. Zhdanova (for Lebedev).

(Geochemistry) (Thermochemistry)



PERSHAN, Aleksendr Yevgen'yevich, akademik; SHCHERBAKOV, D.I., akademik, otvetstvennyy red.; KAFUSTIMSKIY, A.F., red.; LEBENEY, V.I., doktor geol.—min.nauk, red.; SAUKOV, A.A., red.; SHCHERBIMA, V.V., doktor tekhn.red.

[Selected works] Izbrannye trudy. Moskva, Izd-vo akad. nauk SSSR. (MIRA 11:4)

1. Chlen-korrespondent AM SSSR (for Kapustinskiy, Saukov)

(Geochemistry)

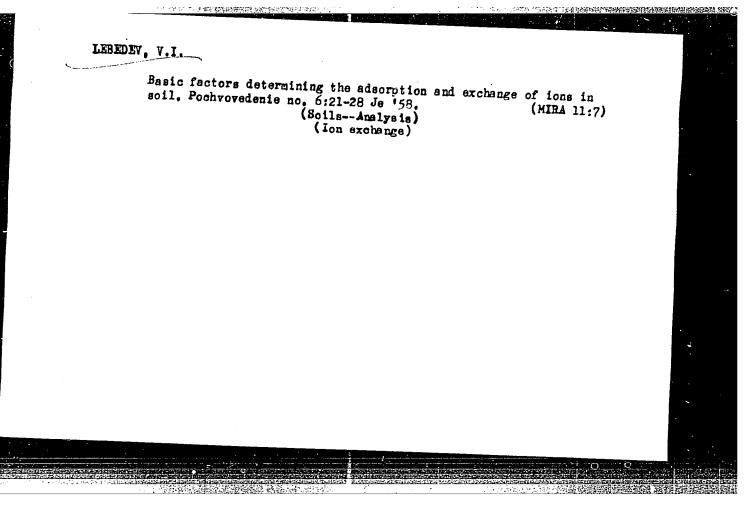
LEBEDEV, V. I.

"Results of Studies of Kaolin and Brucite Under Pressure by Means of Thermal Curves" p. 129

"Synthesis and Structure of Hydrosilicates containing Simple and Complex Heavy Matel Cations " p. 38

Transactions of the Fifth Conference on Experimental and Applied Mineralogy and Petrography, Trudy ... Moscow, Izd-vo AN SSSR, 1958, 516pp.

reprints of reports presented at conf. held in Leningrad, 26-31 Mar 1956. The purpose of the conf. was to exchange information and coordinate the activities in the fields of experimental and applied mineralogy and petrography, and to stress the increasing complexity of practical problems.



3(年) AUTHORS:

Gerasimovskiy, V. I., Lebedev, V. I. SOY/7-58-6-5/16

TITLE:

On the Strontium - Calcium Ratio in Rocks of the Lovozerskiy Marsel (O sootnoshenii strontsiya i kal'tsiya v porodakh Lovozerskogo massiya)

PERIODICAL:

Geokhimiya, 1958, Nr 6, pp 553 - 557 (USSR)

ABSTRACT;

The authors investigated the nepheline syenites of the Lovozerskiy MARKELY (Kol'skiy poluostrov). The Sr and Ca content was flame photometrically determined (oxyacetylene torch, double glass monochromator May photo multiplier MAX-17 rectifier MAX-1). The massif was intrusively formed in several phases and consists of the following rocks: 1. Complex of porphyritic, poecilitic and other nepheline syenites; 2. Complex of lujavrites, foyaites and urtites; 3. Complex of endialyte bearing lujavrites and porphyritic lujavrites which are in connection with the former mentioned, tawites (tavity) and poecilitic sodalite syenites; 4. Complex of young dike rocks. Rocks of the three first mentioned complexes were investigated (Table 2). Their content is between 0.008 and 1.75% SrO and 0.03 and 11.0% CaO. There is no direct condiction

Card 1/3

On the Strontium - Calcium Ratio in Rocks of the

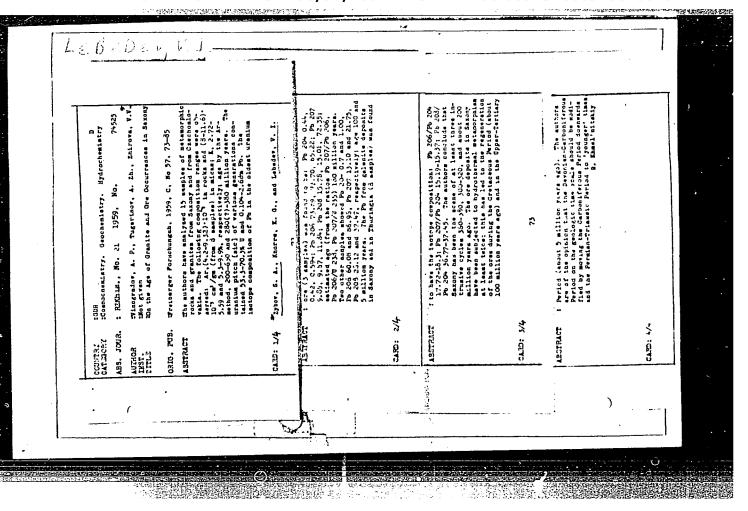
sov/7-58-6-5/16

although they have some maxima and minima in common (Diagram). Apart from Ca Sr is also substituted for K. Furthermore, Sr is genetically related with Na (Table 3). The most important minerals are: Lamprophyllite, belovite, apatite, nordite, loparite, eudialyte, erikite, diaschistic Investigations showed the following facts: Nepheline syenites of the Lovozerskiy **Massix** have a comparatively high Sr/Ca ratio. (0.033 to 0.541). intrusion phase as poecilitic nepheline syenites, as it was frequently assumed. The strontium content of miaskite rocks (first complex) is higher than that of againtic rocks and 5 references, 2 of which are Soviet.

ASSOCIATION:

Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo AN SSSR, Moskva (Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy, AS USSR, Moscow)

Card 2/3



CIA-RDP86-00513R000929020020-7 "APPROVED FOR RELEASE: 08/31/2001

SOY/7-59-1-7/14 3(8)**,** 3(0)

AUTHORS: Gerasimovskiy, V. I., Lebedev, V. I.

On the Distribution of Rubidium and Lithium in the Rocks of TITLE:

the Lovozerskiy Massif(O rasprostranenii rubidiya i litiya v

porodakh Lovozerskogo massiva)

Geokhimiya, 1959, Hr 1, pp 60-63 (USSR) PERIODICAL:

ABSTRACT: The distribution of rubidium and lithium in the nepheline

syenites of the Lovozerskiy Massif (Kola Peninsula) was investigated. This intrusion consists of 4 stages containing the following rocks: 1) Evenly grained, porphyritic, poikilitic, and other varieties of nepheline syenite. 2) Lujavrites,

foyaites, and urtites. 3) Eudialitic lujavrites, in connection with porphyritic lujavrites, tawites, and poikilitic sodalite syenites. 4) Complex of dike-rocks of recent formation. From the first complex (miaskitic) 4 samples, from the second complex (agpaitic) 16 samples, and from the third complex (also agpaitic) 9 samples were investigated. Na,0, K,0, Li,0 and

Rb₂O contents were analyzed (Table). Lithium and rubidium

were photometrically determined. The amounts vary greatly, Rb₂O between 0.0014 and 0.045%, and Li₂O between 0.0004 and

Card 1/2

On the Distribution of Rubidium and Lithium in the Rocks of the Lovozerskiy Massif

0.0320%. This may be explained by the great variations in the minerals occurring. There is no direct relation between the rubidium and potassium contents or between the lithium and magnesium contents. Rubidium and lithium were accumulated towards the end of the magnatic development in the rocks of the third stage. Lithium appears as characteristic element of the Lovozerskiy Massif. There are 1 table and 3 references, 1 of which is Soviet.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo

AN SSSR, Moskva

10.16 "HEARI DELEGRACION ESPECIALISTO

(Institute of Geochemistry and Analytical Chemistry imeni

V. I. Vernadskiy, AS USSR, Moscow)

SUBMITTED: July 29, 1958

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020020-7"

3(5), 3(8)

AUTHOR:

Lebedev, V. I

SOV/7-59-6-1/17

TITLE:

On the Rules of Isomorphism. 1. Distribution of Mg, Fe, Mn, Ca, Sr, Ba, Li, K, Rb, and Several Other Elements in Minerals Which Are Connected With Processes of Magma Crystallization

PERIODICAL:

Geokhimiya, 1959, Nr 6, pp 483 - 494 (USSR)

ABSTRACT:

Considering energy conditions the author found (Ref 8) a law of isomorphism basing on rules established by A. Ye. Fersman (Ref 14) and others (Ref 15), and which may be briefly explained in the following way: at higher temperature the ion strengthening the lattice structure and thus increasing energy enters the lattice; at lower temperatures also ions of lower valence, lower ionization potential etc are admitted which reduce lattice energy. The present paper shows this rule on the basis of the experimental results of other authors. A diagram is given (Fig 1) from the papers by H. Ramberg and G. De-Vore (Refs 16, 17) on the distribution of Mg and Fe in coexisting olivines and orthopyroxenes. The characteristic feature of the rule mentioned is the fact that at high magnesium contents of the melt the olivine crystallizing first contains more magnesium than pyroxene which crystallizes later. This may be proved by

Card 1/2

On the Rules of Isomorphism. 1. Distribution of SOV/7-59-6-1/17 Mg, Fe, Mn, Ca, Sr, Ba, Li, K, Rb, and Several Other Elements in Minerals Which Are Connected With Processes of Magma Crystallization

comparing the energies of formation. Further the paper by S. R. Nokkolds and R. L. Mitchell (Ref 10) is mentioned dealing with the distribution of gallium, chromium, vanadium, molybdenum, lithium, nickel, cobalt, scandium, lead, manganese, yttrium, lanthanum, strontium, barium, and rubidium in the various minerals of the Caledonian deep-seated rock of western Scotland (Fig 2). The behavior of the individual elements is discussed. L. V. Tauson drew the exactly opposite conclusion herefrom, i.e. isomorphism in earlier generations will be the higher the lower the energy of formation is as a result of the entrance of the isomorphous element (Ref 12). The author proves that this conclusion could only hold if oxygen, silicon, and aluminum occurred purely as ions, i.e. as 0^{2-} , $5i^4+$, and 41^5+ . The papers by N. V. Belov and A. G. Betekhtin are mentioned. There are 2 figures and 21 references, 11 of which are Soviet.

ASSOCIATION:

Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: Card 2/2

University) January 21, 1959

5(2) AUTHOR: Lebedev, V. I. SOV/75-14-3-4/29 TITLE: Determination of Alkali and Alkaline-Earth Elements in Silicate Rocks by Means of Flame Spectrophotometry (Opredeleniye shchelochnykh i shchelochnozemel'nykh elementov v silikatnykh porodakh metodom spektrofotometrii PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 3, pp 283-287 (USSR) ABSTRACT: For the determination of alkali- and alkaline-earth elements in granites, syenites, gneiss, microcline etc. a spectrophotometer was constructed. The optic system consists of a double glass monochromator "DM", the photoelectrical device of the photomultipliers FEU-17 (for the visible spectrum) and FEU-22 (for the red and infrared spectrum range), the rectifier VVS-1 and the mirror galvanometer M-21. The spectral lines Li - 670.7 mm, K - 766.5 mm, Na - 588.9 mm, Rb - 780.0 mm, Ca - 549.8 mm, Sr - 460.7 mm were determined. The mineral to be analyzed was decomposed by hydrogen fluoride, or chloric acid. In the presence of aluminum the dried perchlorates Card 1/2 were annealed and the alkali- and alkaline-earth compounds

Determination of Alkali and Alkaline-Earth Elements SOV/75-14-3-4/29 in Silicate Rocks by Means of Flame Spectrophotometry

removed by 2-n hydrochloric acid, the aluminum precipitated with ammonia. (Table 1 gives the results obtained by this method at contemporary presence of Al and Sr). Tables 2 and 3 present the results of the analyses, table 4 gives a comparison with the values found according to other methods. The errors in measurement do not exceed 5 - 6 %. The method is applicable to minerals containing at least 0.001 % of alkali- and alkaline-earth elements. There are 1 figure, 5 tables, and 18 references, 3 of which are Soviet.

ASSOCIATION:

Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR, Moskva (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy of the Academy of Sciences, USSR, Moscow)

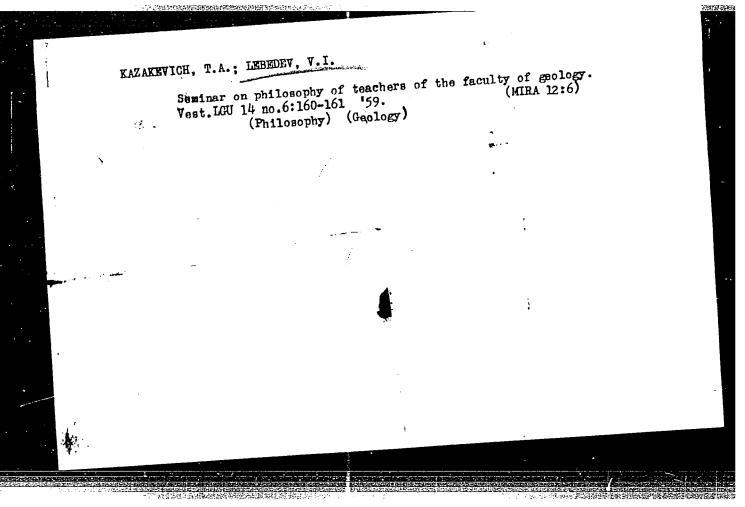
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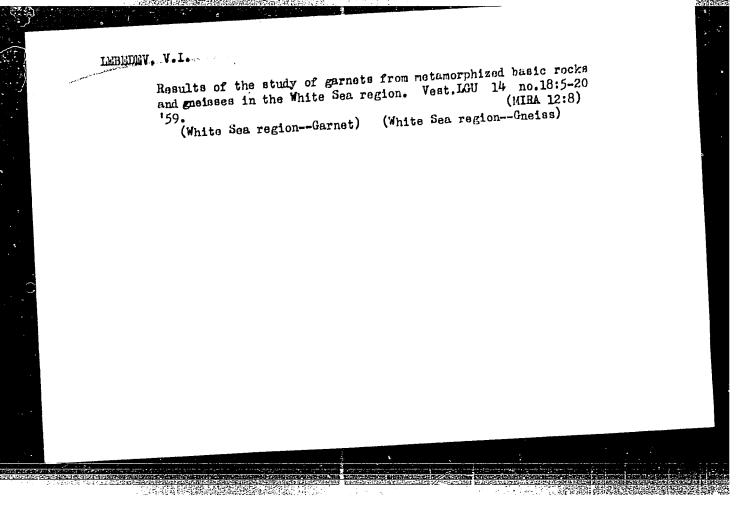
April 1, 1958

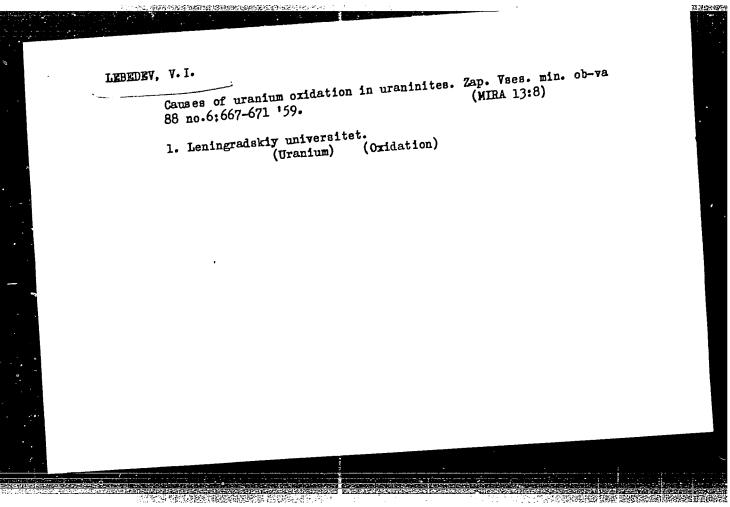
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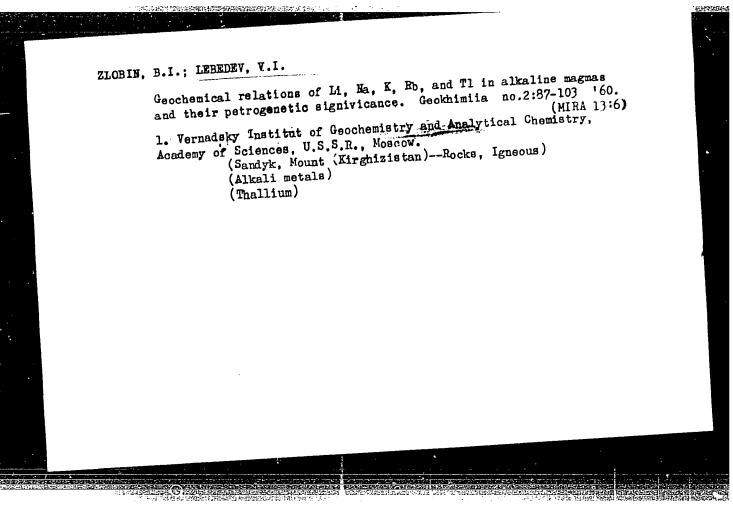
"APPROVED FOR RELEASE: 08/31/2001

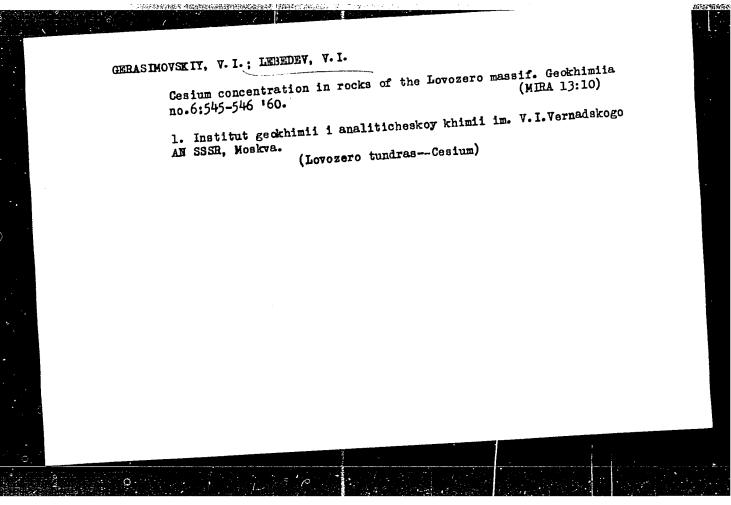
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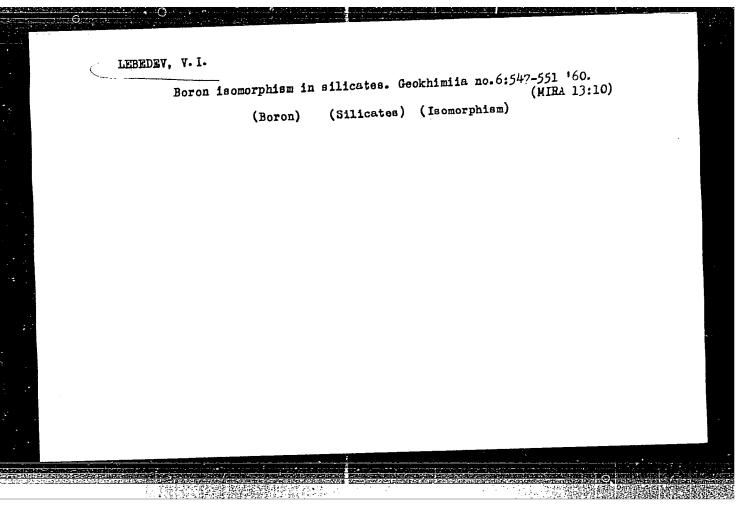






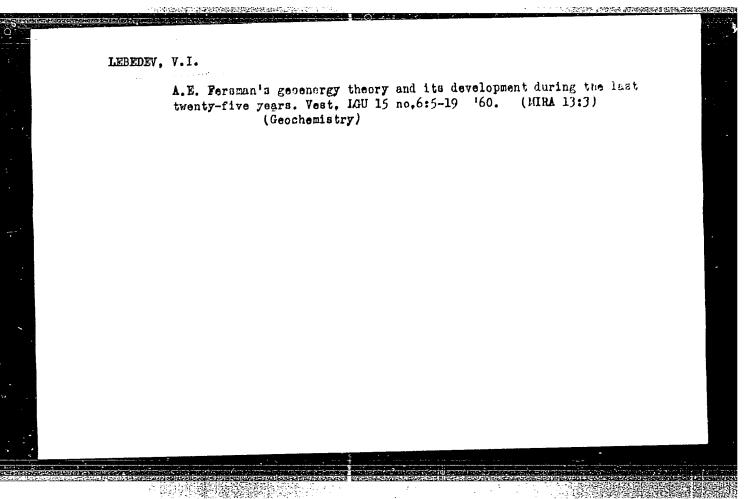






SHIROKOV, A.A.; LEBERDEV, V.I.; KOVALEV, K.G.

Experimental and practical work in interpreting aerial color photographs. Geod. i kart. no. 11:34-35 v '60. (MIRA 13:12) (Photographic interpretation)

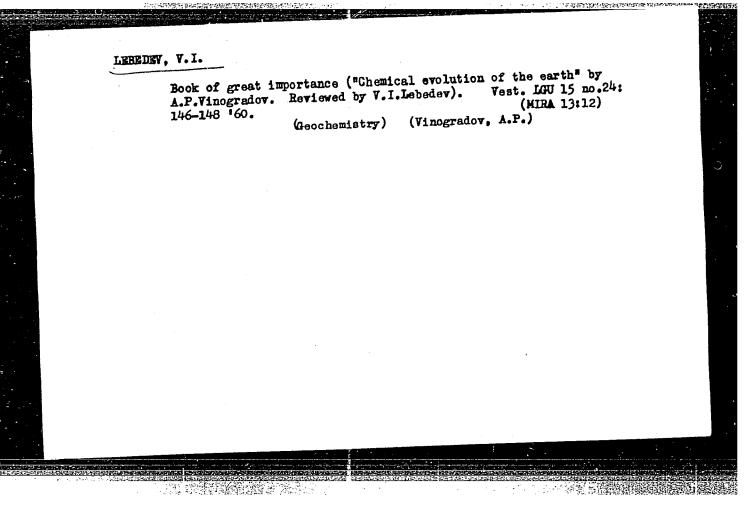


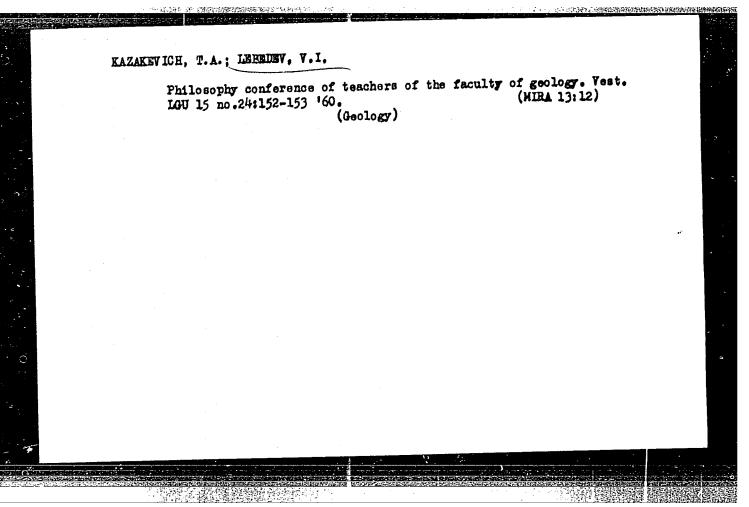
LEBEDEV, V.I. Effect of the character of chemical links on the isomorphism of boron in silicates and its behavior in igneous and other processes of crystallization. Vest. IGU 15 no.24:28-39 160.

(MIRA 13:12)

(Crystallization) (Boron)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020020-7"





NIKIFOROV, V.P.; TSYPLAKOV, A.M.; LEBEDEV, V.I.

Selecting the number and the design of anodic pins for aluminum electrolytic cells with current fed from on top.

TSvet. met. 33 no.10:56-62 0 '60. (MIRA 13:10)

1. Vsesoyuznyy alyuminiyevo-magniyevyy institut.
(Aluminum-Elactrometallurgy)

ALIMARIN, I.P.; BILIMOVICH, G.N.; BUSEV, A.I.; VAYNSHTEYN, E.Ye.; VOLYNETS,
M.P.; GORYUSHINA, V.G.; DYMOV, A.M.; YELINSON, S.V.; ZVYAGINTSEV,
O.Ye.; KOLOSOVA, G.M.; KORCHEMNAYA, Ye.K.; LEHEDEV, V.I.; MALOFEYEVA,
G.A.; MELENT'YEV, B.N.; NAZARENKO, V.A.; NAZARENKO, I.I.; PETROVA, T.V.;
POLUEKTOV, N.S.; PONOMAREV, A.I.; HYABUKHIN, V.A.; STROGANOVA, N.S.;
CHERNIKHOV, Yu.A.; VINOGRADOV, A.P., akademik, otv. red.; RYABCHIKOV,
D.I., doktor khim. nauk, prof., otv. red.; GUS'KOVA, O., tekhn. red.

[Methods for the determination and analysis of rare elements] Metody
opredelenia i analiza redkikh elementov. Moskva, 1961. 667 p.

(MIRA 14:7)

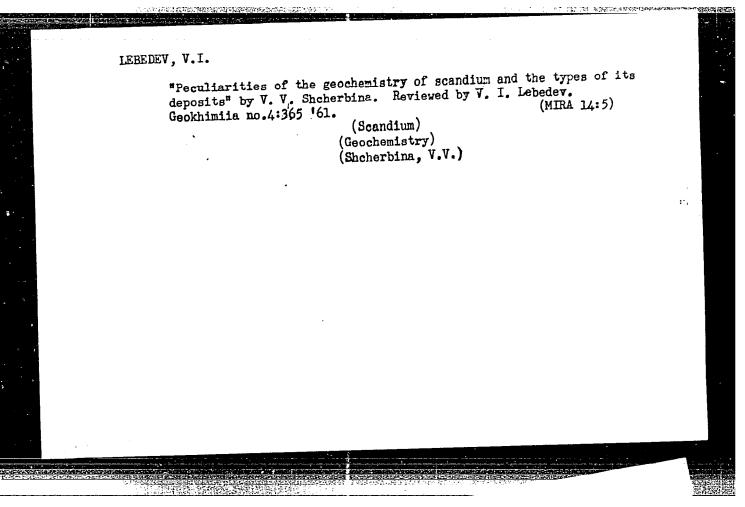
1. Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii.

(Metals, Rare and minor)

 VAYNSHTEYN, E. Ye.; LEBEDEV, V.I.

Recent determinations of Li, Na, K, Rb, Cs, Ca, and Sr in the standards W-1 and G-1 by flame photometry. Geokhimiia no.4:362-363 61. (MIRA 14:5)

1. Institut geokhimii i analiticheskoy khimii imeni V. I. Vernadskogo AN SSSR, Moskva. (Metals-Spectra)



. LEBEDEY, V.I.

8/122/61/000/011/006/006 D221/D301

None given

AUTHOR:

TITLE:

Dissertations

Vestnik mashinostroyeniya, no. 11, 1961. 91 The following dissertation was presented for the degree The following dissertation was presented for the Deringrad.

The following dissertation was presented for the degree for the degree of the Leningrad.

TEXT:

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The following dissertation was presented for the Leringrad Foly of Technical Sciences:

The following technical Institute imeni M. I. Kalinin) "The kinematics of three dechnical linkage mechanisms". For the degree of Candidate of the Mogkovski" starko- v. N. Kedrinskiv. of the Mogkovski" starko- v. N. Kedrinskiv. of the Mogkovski. PERIODICAL: dimensional linkage mechanisms". For the degree of Candidate of the Moskovski; starkore Technical Sciences: V. N. Kedrinskiy, of the Moskovski; starkore Technical Sciences: V. N. Kedrinskiy of the Moskovski; starkore Technical Sciences: V. N. Kedrinskiy, of the Moskovski; starkore Technical Sciences: V. N. Kedrinskiy, of the Moskovski; starkore Technical Sciences: V. N. Kedrinskiy, of the Moskovski; starkore Technical Sciences: V. N. Kedrinskiy, of the Moskovski; starkore Technical Sciences: V. N. Kedrinskiy, of the Moskovski; starkore Technical Sciences: V. N. Kedrinskiy, of the Moskovski; starkore Technical Sciences: V. N. Kedrinskiy, of the Moskovski; starkore Technical Sciences: V. N. Kedrinskiy, of the Moskovski; starkore Technical Sciences: V. N. Kedrinskiy, of the Moskovski; starkore Technical Sciences: V. N. Kedrinskiy, of the Moskovski; starkore Technical Sciences: V. N. Kedrinskiy, of the Moskovski; starkore Technical Sciences: V. N. Stalins (Moscow Machine Technical Sciences: V. N. Stalins) "The investigation of and Technical Sciences: V. N. Stalins (Moscow Machine Technical Sciences: V. N. Stalins) "The investigation of and Technical Sciences: V. N. Stalins (Moscow Machine Technical Sciences: V. N. Stalins) "The investigation of and Technical Sciences: V. N. Stalins (Moscow Machine Technical Sciences: V. N. Stalins) "The investigation of and Technical Sciences: V. N. Stalins (Moscow Machine Technical Sciences: V. N. Stalins) "The investigation of and Technical Sciences: V. N. Stalins (Moscow Machine Technical Sciences: V. N. Stalins (Moscow Moscow Mosco and Tool Institute imeni I. V. Stalin) "The investigation of realizing means for realizing means for realizing methods of cutting bevel gears and practical means for realizing damping methods of cutting bevel gears and practical means for realizing damping methods of cutting bevel gears and practical means for realizing damping methods of cutting the Rizhskiy Foliation of the Rizhskiy Foliation of the friction clutch type". Chang Sung Lan. of the friction clutch type".

Card 1/3

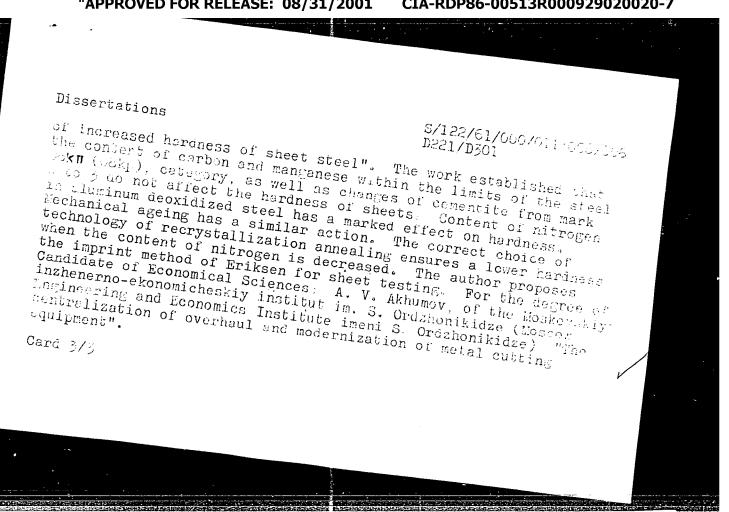
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Dissertations

S/122/61/000/011/006/006 D221/D301

the Leningrad Polytechnical Institute imeni M. I. Kalinin. "The investigation of vibrations due to planing". Fun Tich Sun of the Leningrad Polytechnical Institute im. M. I. Kalinin. "Investigating the damping of vibrations by hydraulic vibration dampers". Yu. I. Cherednichenko. of the Moskovskiy avtomekhanicheskiy institut (Moscow Auto-Mechanical Institute) "The investigation of the characteristics of hydraulic torque converters and working conditions of the latter with an automobile engine". Liu Nyn Hung of the Leningrad Folytechnical Institute imeni M. I. Kalinin, "The investigation of transient processes in hydraulic tracer systems with valves used in metal cutting machine tools". O. F. Mikhaylov. of the Vsesoyuzenyy zaochnyy politekhnicheskiy institut (All-Union Correspondence Folytechnical Institute) "The methods of investigating locating of machine tools in production conditions". E. S. Fal'kevian of the Dnepropetrovskiy ordens Trudovogo Krasnogo Znameni metallungi nevally institut im. I. V. Stalina (Dnepropetrovskiy Order of the Red Barner of Labor Metallurgical Institute hased I. V. 3 a' ye' "The actions of Labor Metallurgical Institute hased I. V. 3 a' ye' "The actions

Card 2/3



CIA-RDP86-00513R000929020020-7" **APPROVED FOR RELEASE: 08/31/2001**

Increasing the sensitivity of the determination of elements in a flame. Zhur.anal.khim. 16ro.2:124-128 Mr-Ap '61.

(MIRA 14:5)

1. Vernadskiy Institute of Geochemistry and Analytical Chemistry, Academy of Sciences, U.S.S.R., Moscow.

(Flame photometry)

в/075/61/016/003/001, 0 7 в106/в208

AUTHOR:

Lebadev, V. I.

Card 1/7

Cesium determination in rocks by flame spectrophotometry

PERIODICAL: Zhurnal analiticheskoy khimii, v. 16, no. 3, 1961, 272-274

TEXT: Since the method of flamephotometric determination of $10^{-2} - 10^{-3}$ % cesium in minerals, described by Ye. A. Fabrikova (Ref. 4: Fabrikova Ye. A. Zh. analit.khimii 4, 41 (1959)), is not applicable to the determination of 10-4 % Cs in rock samples, the author used for such determinations a method previously devised by him (Ref. 5: Lebedev V. I., Zh. analit. khimii 14, 283 (1959); Ref. 6: Gerasimovskiy V. I., Lebedev V. I., Geokhimiya No. 1, 60 (1959)) for the determination of rubidium. The measuring device consisted of an air-acetylene hurner, a monochromator, and a photomultiplier (Ref. 5). Potassium and rubidium considerably increase the emission of cesium. At comparatively high potassium and rubidium contents (K/Cs > 1500-2000), however, a practically constant emission of cesium takes place. As the concentration ratio K/Cs in rocks usually exceeds by far the given value, the cesium determination may be

CIA-RDP86-00513R000929020020-7" APPROVED FOR RELEASE: 08/31/2001

S/075/61/016/003/001/007 B106/B208

Cesium determination ...

carried out without preceding addition of potassium salts. High amounts of potassium and rubidium, however, cause an intense background in the determination, which is more intense than the emission of cesium even in the case of small slit widths of the monochromator. The background has, therefore, to be measured with particular accuracy, especially when using monochromators of low dispersion. The measurements were made in three points of the cesium-free standard specimens, and the value of the background was calculated from the ratios

 $I_{H_1}^o/I_{H_{\lambda}}^o = I_{E_1}^x/I_{H_{\lambda}}^x$ and $I_{H_2}^o/I_{H_{\lambda}}^o = I_{H_2}^x/I_{H_{\lambda}}^x$

(Fig.2). In some determinations, an NCN-51 (ISP-51) spectrograph was used instead of the monochromator. In this case, the background value was considerably lower and could be calculated as the arithmetic mean of two measurements on both sides of the analytical line. To determine the cesium content, 1 g of the finely pulverized siliceous rock specimen was wetted with distilled water in a platinum dish, and then carefully funed off with 20-25 ml hydrofluoric acid and 1 ml sulfuric acid. By further evaporation, the fluorides are completely removed, one wets again with

Card 2/7

S/075/61/016/003/001/007 B106/B208

Cesium determination...

water and evaporates to dryness. The dry residue is heated to slight red heat for 1-2 min over a gas flame, with iron, aluminum, and part of magnesium and calcium passing into the oxides. The cold residue is mixed with 50-70 ml water, 0.5 g ammonium carbonate, and 1-2 drops of concentrated ammonia solution, and made up with water to 100 ml in a measuring flask. The content of the flask is filtered after 30-40 min. An aliquot of the filtrate is fumed off with nitric acid to remove the ammonium salts. The residue which contains the alkali salts is dissolved in some water, and mixed with methanol or ethanol to a concentration of 40 %. Thus, the evaporation rate of the solution in the flame and, as a result, the accuracy of the determination are increased, the latter to the 2-2.5 fold. Prior to the cesium determination, the contents of sodium, potassium and rubidium are measured. The specimens are then divided into three groups with <1 %, 1-4 % and 4-10 % potassium according to their contents of potassium and rubidium (the potassium content being of major importance). Standard specimens with about the same contents of sodium, potassium, rubidium and alcohol, and with the following cesium contents are prepared for each of these groups: 0.0; 0.1; 0.2; 0.5; 1.0; 1.5; 2.0; 3.0 γ/ml . The flame-photometric cesium determination was made on the basis of the line Cs $852~\text{m}\mu$. The completeness of cesium Card 3/7

S/075/61/016/003/001/007 B106/B208

Cesium determination ...

separation by the method described was checked by means of the radioisotope Cs 137. Cesium losses do not exceed 5 %. Accuracy and reproducibility of the method described were tested on synthetic solutions which had been prepared from pure potassium, rubidium, and cesium salts (Table 2); besides, several determinations were carried out on the standard specimen G-1 and on some other specimens (Table 3). The above method was used for cesium determination in silicates and for the determination of 1.10-4-7.10-4% rubidium in stony meteorites. There are 2 figures, 3 tables, and 9 references: 4 Soviet-bloc and 5 non-Soviet-bloc. The two references to English-language publications read as follows: Liebenberg C. I., Geochim. et Cosmochim. Acta 10, 196 (1956); Ahrens L. H. Quantitative Spectrochemical Analysis of Silicates, Pergamon Press, London, 1954.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im.

V. I. Vernadskogo AN SSSR, Moskva (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy AS USSR,

Moscow)

SUBMITTED:

September 28, 1959

Card 4/7

Certain little known laws in the periodic system of elements, and their importance for mineralogy and geochemistry. Analele geol geogr 15 no.4:29-41 O-D'61. (Mineralogy) (Geochemistry)

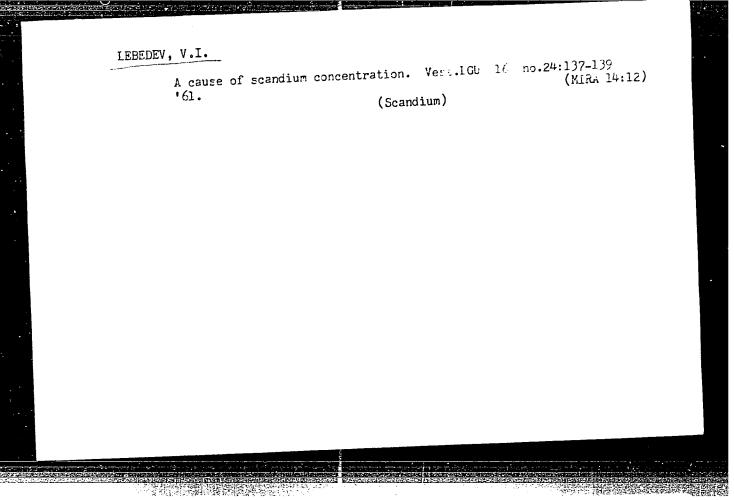
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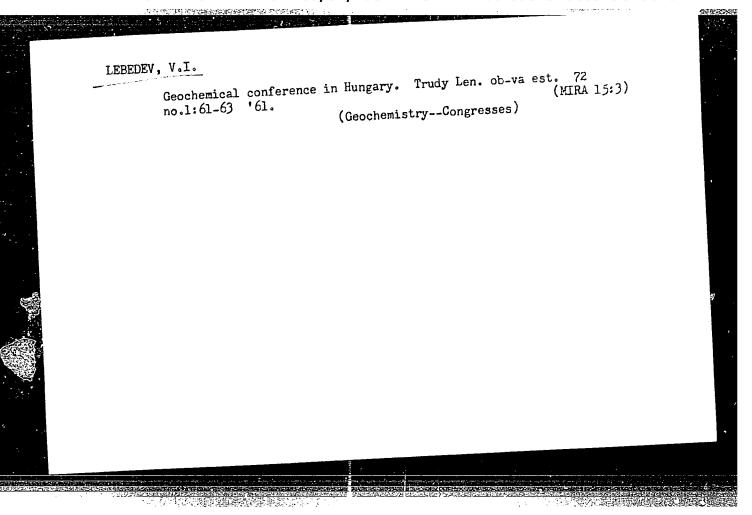
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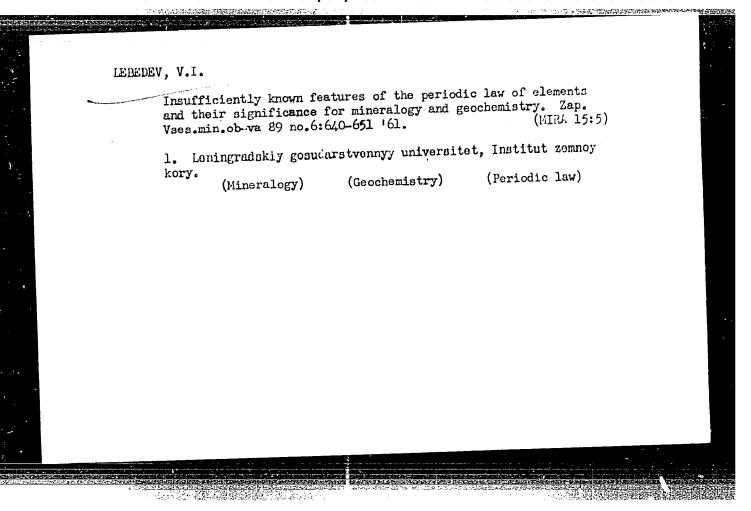
VAYNSHTEYN, E.Ye.; LEBERTY, V.I.

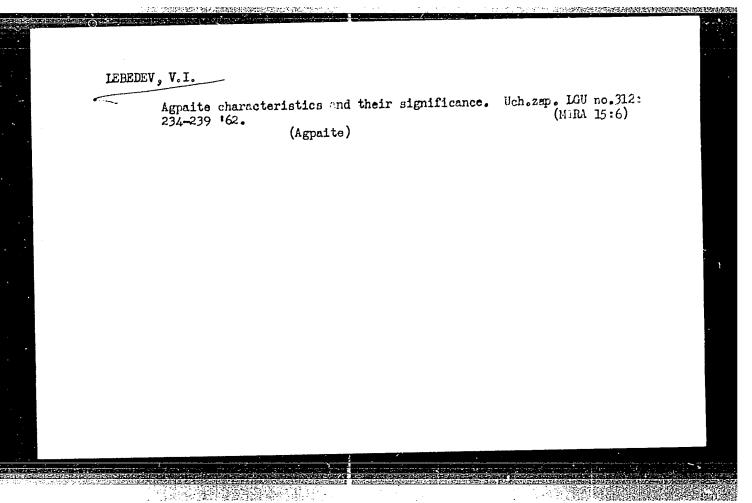
Effect of some organic substances on calcium radiation in a flame in the presence of aluminum. Zhur.anal.khim. 16 no.6:670-673 N-D '61. (MIRA 14:12)

1. Vernadsky Institute of Geochemistry and Analytical Chemistry,
Academy of Sciences U.S.S.R., Moscow
(Calcium-Spectra)
(A_uminum compounds)











"Plus"- and "minus" minerals from the viewpoint of the volume law and principles of chapter two of silicate crystallochemistry; role of pressure and chemical binding energy in transformations of the crustal mineralogical composition. Vest.LGU 17 no.6: 36-46 '62. (MIRA 15:4)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020020-7"

PUGACHEV, Aleksandr Sergeyevich; <u>IEBEDEV, V.I.</u>, inzh., retsenzent; NESTEROV, P.A., inzh., retsenzent; KORKIN, F.S., dotsent, nauchnyy red; SOSIPATROV, O.A., red.; KONTOROVICH, A.I., tekhn. red.

[Developed area of sheet structure elements] Razvertki elementov listovykh konstruktsii. Izd. 2., perer. i dop., Leningrad, Sudpromgiz, 1963. 319 p. (MIRA 16:6) (Sheet—Metal work) (Shipfitting)

LEHEDEV, V.I.

"Law of volumes" in petrography; based on F.IU. Loewinson-Lessing's works from the viewpoint of the theory of geoenergy.

Vop. magm. i metam. 1:92-107 '63. (MIRA 16:8)

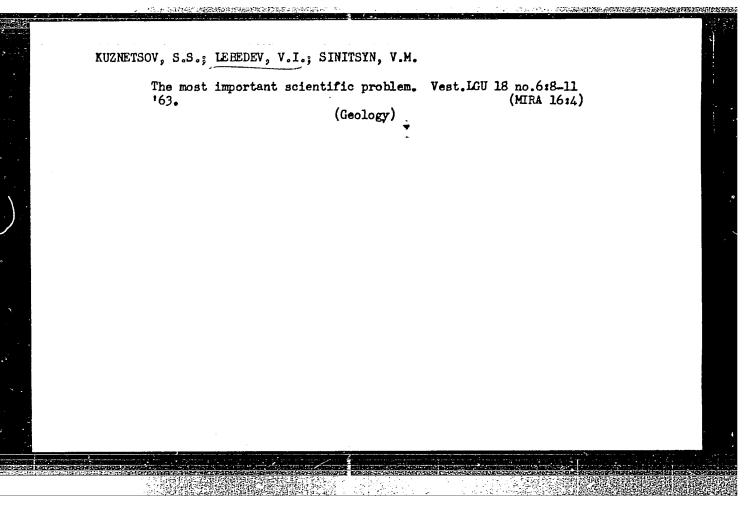
(Petrology)

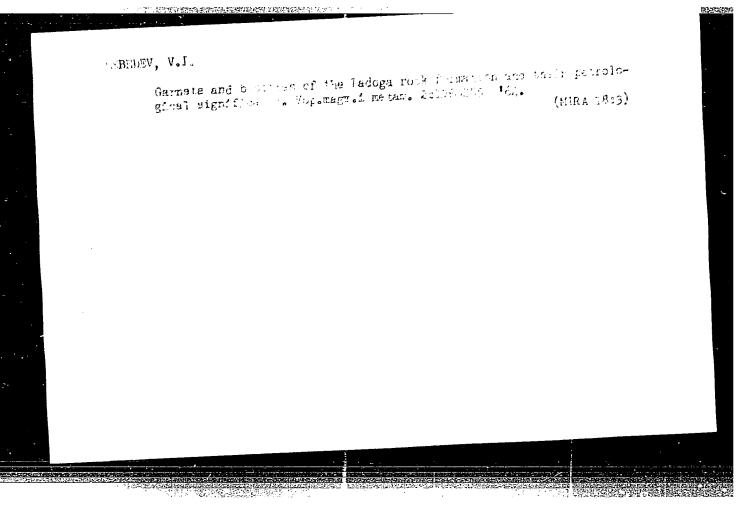
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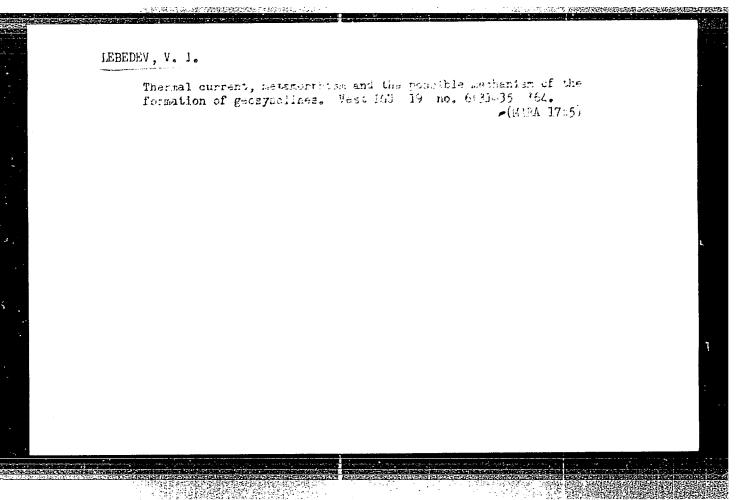
V. I. LEBEDEV (USSR)

"On the significance of high pressure in metamorphic processes."

Report presented at the Conference on Chemistry of the Earth's Crust, Moscow, 14-19 Mar 63.



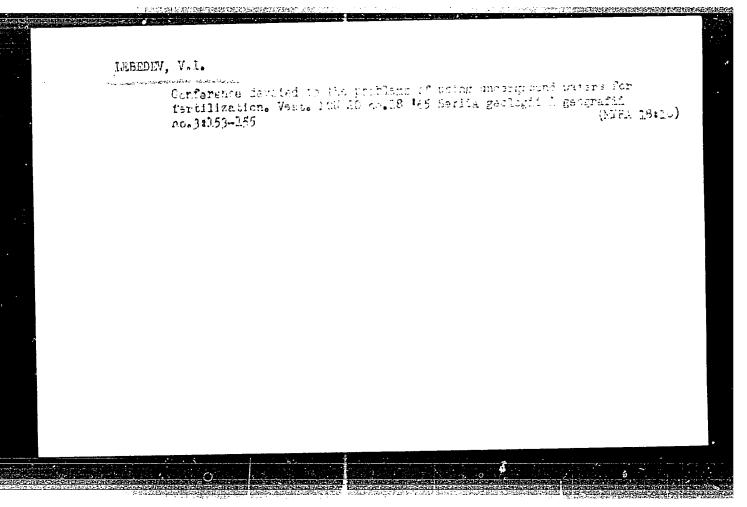




IEBEDEV, V.I.; NAGAYTSEV, Yu.V.; FOTCTSKAYA, V.Ye.; PRUDNIKCV, fe.D.;
SHAPKINA, Yu.S.; YURCVA, G.M.

Materials on the study of the mineralogy of metamorphic rocks
in the northwestern part of the Lake Ladoga region. Min. i
geokhim. no.1:131-156 '64.

(MIRA 18:9)



LEBEDEV, V.I.

Some general problems of isomorphism. Zap. Vses.min.ob-va.
93 no. 2:126-138 '64. (MIRA 17:6)

1. Institut zemnoy kory pri Leningradskom universitete.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020020-7"

LEBEDEV, V.I., prof., otv. red.; MORACHEVSKIY, A.G., dots., otv. red.; FROKHOROVA, M.I., prof., otv. red.; TRUTNEV, A.G., prof., otv. red.; POZDYSHEVA, V.A., red.; PETROVICHEVA, O.L., red.; MATVEYEVA, V.V., red.; SKONYNINA, N.P., red.

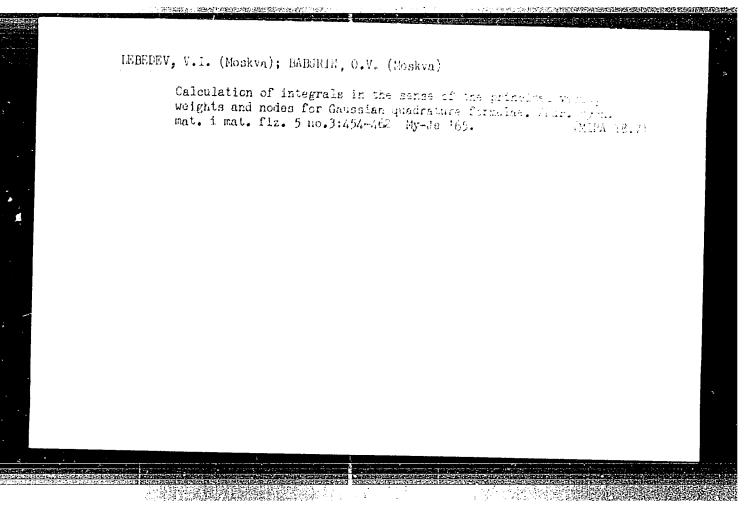
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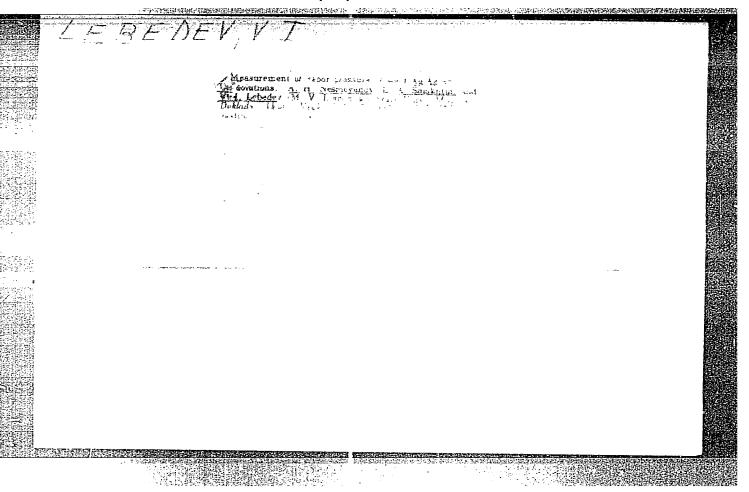
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SOV/76-33-2-17/45 **5(4)** AUTHORS: Nesmeyanov, An. H., Smakhtin, L. A., Choporov, D. Ya.,

Lebedev, V. I.

An Investigation Into the Thermodynamics of Solid Solutions TITLE:

of Gold, Silver, and Copper I (Iscledovaniye po termodinamike

tverdykh rastvorov zolota s serebrom i med'yu I)

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 2, PERIODICAL:

pp 342 - 348 (USSR)

ABSTRACT: Because the components of solid solutions have such an

> exceptionally low vapor pressure investigations of the thermodynamic properties of such solutions by measurement of the partial pressure are very difficult. These measurements could be facilitated by the use of radioactive isotopes. In this paper data are given for the vapor pressure of solid Au, Ag, and Cu, since the literature data for the pressure of saturated vapor of these metals are very contradictory. Fure metals,

(99.9%) and the radioactive isotopes Au198, Ag110, and Cu64 were used. The vapor pressure was measured using the effusion method of Knudsen and an appropriate apparatus (Fig 1). The

Card 1/3 effusion space was produced from molybdenum. From the experi-

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. An Investigation Into the Thermodynamics of Solid Solutions of Gold, Silver, and Copper I

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mental data on the vapor pressure (Tables 1-3) the following equations were obtained using the method of least squares: for Ag in the interval $770-960^{\circ}$ C lg p = -14058/T+8.8550; for Au at 820-1050°C lg p = -18016/T+8.6833; for Cu at $920-1080^{\circ}$ C 1g p = -17320/T+9.320. The latent heats of sublimation at absolute zero $_{\Delta}$ $\mathrm{H}_{o}^{o},$ were calculated and the

following results were obtained: for Ag 67630+50 cal/gram atom; Au 87520+110 cal/gram atom; Cu 80980+140 cal/gram atom. A comparison of the data obtained with those of other authors (concerning the pressure of the saturated vapors of solid Ag) (Figs 2-4) indicates that the most reliable data are given in the paper by Macabe and Birchenall (Makeyb) (Ref 4) and in the present paper, while the values found by Shadel and Birchenall (Ref 5) are too high and the values found by Harteck (Gartek) (Ref 6), Langmuir (Lengmyur) (Ref 7), and An.H. Nesmeyanov et al (Ref 8) are too low. The most reliable values for liquid Ag were obtained by Fischer (Fisher)(Ref 9). Data on the vapor pressure of solid Cu by Hersh (Gersh) (Ref 10), Marchall, Dornte and Norton (Marshal)

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